STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

NORTH SHORE GAS COMPANY	)	
	)	Dkt. 09-0166
Proposed general increase in natural gas rates (Tariffs filed on February 25, 2009)	)	
	)	
	)	
THE PEOPLES GAS LIGHT AND COKE COMPANY	)	Dkt. 09-0167
	)	(Consol.)
Proposed general increase in natural gas rates (Tariffs filed on February 25, 2009)	)	

REBUTTAL TESTIMONY OF EDWARD C. BODMER
ON BEHALF OF
THE CITIZENS UTILITY BOARD AND
THE CITY OF CHICAGO

CUB-CITY EXHIBIT 3.0

AUGUST 4, 2009

REBUTTAL TESTIMONY OF

EDWARD C. BODMER

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I. QUALIFICATIONS AND SUMMARY OF TESTIMONY

Q. What is your name and on whose behalf are you testifying?

A. My name is Edward C. Bodmer. I am testifying on behalf of the Citizens Utility Board ("CUB") and the City of Chicago ("City").

Q. Have you previously submitted testimony in this proceeding?

A. Yes. I submitted direct testimony concerning the Illinois Commerce Commission's (the "Commission" or "ICC") determination of the appropriate cost of equity for The Peoples Gas Light & Coke Company ("Peoples Gas") and North Shore Gas Company ("North Shore") (collectively, "the Companies").

Q. Please briefly summarize the principal points that you made in your direct testimony.

A. In my direct testimony I examined financial market information during periods that encompass the worst financial crisis since the Great Depression to assess the difference in risk between regulated natural gas companies like Peoples Gas and North Shore and non-regulated companies. I used data on companies included in Standard & Poor's S&P 500 index as a proxy for information about non-regulated firms. Such firms are subject to volatility in market prices, market demand, input cost recovery, and other factors. And unlike Peoples Gas and North Shore, these companies lack the protections of economic regulation. My examination demonstrated that typical non-regulated companies have much higher risk than regulated natural gas distribution companies.

I then commented on lessons of the stock market crash of October 2008. The main lesson for regulators is that the dramatic losses in market value during that period emphasize the need to assure that their cost of capital determinations are well-grounded.

They should not depend on investor expectations about future earnings growth that are not sustainable or rationally grounded in objective market data. I also described why it is not appropriate in today's marketplace to estimate a utility's cost of capital by adding a premium to bond yields. Finally, I demonstrated that a simple market-to-book ratio check verifies that the cost of capital for the sample of companies used by the cost of equity expert for Peoples Gas and North Shore is well below 9%.

Q. What was the response of Peoples Gas and North Shore to your testimony?

A. Two consultants hired by the Companies – Mr. Moul and Mr. Fetter -- responded to my testimony and also to the respective pre-filed direct testimonies submitted by CUB-City witness Mr. Thomas and Commission Staff witness Mr. McNally. Though the Companies' witnesses made minor comments on the specifics of my testimony, their principal complaint was that my recommendations -- and those of Messrs. McNally and Thomas -- are outside the mainstream of returns granted to utilities in other jurisdictions by various regulatory agencies. They warned the Commission that the financial community would not be pleased if the Commission accepted any one of our respective cost-of-equity recommendations. The Companies' witnesses mentioned investor's subjective return-on-equity expectations at many points in their testimony, suggesting that those expectations should not be disappointed and, if they were, the Companies' stock prices would fall.

Q. Please summarize the main points the Companies' cost of equity witnesses emphasized in their respective rebuttal testimonies.

A. There were four main points made in the Companies' two pieces of rebuttal testimony in response to my testimony and the respective direct testimonies of Mr. Thomas and Mr. McNally.

First, Messrs Moul and Fetter asserted that the Commission should focus on what other regulatory bodies have done, rather than on deriving the Companies' real cost of capital from objective market data. In that connection, the witnesses claimed that the Commission also should worry about the reaction of the financial community if its determination (no matter how well-founded) is not similar to what other companies received. (For convenience, I refer to the financial community in general as "Wall Street" since it is not really a community.)

Second, the Companies' experts identified the rate of return investors expect the Commission to grant and (derivatively) the return they expect the utility to earn as a key factor that should drive the Commission's rate-of-return determination. They warned that, if the Commission makes a lower-than-expected determination, bond rating agencies may lower the Companies' credit rating and the Commission will be looked upon unfavorably by Wall Street. A principle implication of this view is that a return that deviates from expectations will be unfair because the valuation of equity will decline.

Third, Mr. Moul and Mr. Fetter asserted that the Companies are not low-growth/low-risk utilities. Instead, the Companies are subject to many risks because they are capital intensive and allegedly must make capital expenditures even during economic downturns. Not only does the company have high risks, it is also a growth stock.

Finally, the Companies' experts opined that it is not necessary or appropriate to make cost of capital adjustments for riders that transfer risk from utility investors to ratepayers because some of the companies in Mr. Moul's proxy group have (possibly

similar) risk-reducing mechanisms. Also, even though, according to Mr. Moul, the riders offer no benefits that have value to risk-sensitive investors, the Companies view approval of the riders as critical to their business operations.

Q. How is the remainder of your testimony organized?

A. I begin by elaborating on the first three points summarized above; the fourth is addressed by CUB-City witness Mr. Thomas in his rebuttal testimony. I then respond to specific allegations made by the Companies with respect to my analysis. Finally, I offer a few comments on the testimony of Staff witness McNally. My comments regarding Mr. McNally's testimony include positive observations as well as a few criticisms that I hope Staff will find constructive.

II. RATES OF RETURN GRANTED BY OTHER COMMISSIONS AND WALL STREET REACTIONS

Q. What is the significance of the Companies' allegations regarding returns granted by other regulatory agencies and the reaction of Wall Street?

A. The Companies' witnesses inappropriately connected the two ideas. First, the Companies compared the respective cost of capital recommendations made by Staff, Mr. Thomas, and me to the recent history of returns granted by other regulatory agencies. The comparisons the Companies presented involve a significant number of electric utility companies that own generating plants and natural gas companies that have marketing operations. Because such companies face greater risks than Peoples Gas and North Shore, the cost of capital estimates recommended by Messrs McNally, Thomas, and me are predictably lower than most of the returns granted to the electric and natural gas companies in the comparison

group. The Companies then emphatically asserted that the financial community would have a very negative reaction if the Commission accepted one of the three recommendations, even though the recommendations are based on objective market data that reflect the Companies' real cost of capital.

Q. How do the Companies inject fear of Wall Street into the Commission's determination of the Companies' cost of capital?

A. At the beginning of his testimony, Mr. Moul wrote:

> The financial community would be extremely concerned if the Commission set the Company's cost of equity at the level proposed by Staff and would be shocked if the Commission adopted the CUB/City proposal.

NS-PGL Ex. PRM-2.0 at 2, LL. 33-35. Mr. Fetter made a similar statement near the beginning of his testimony:

> In my opinion, further reducing the Utilities' allowed ROEs, as recommended by the Staff and intervenors in this proceeding, would be viewed as a ***major setback***, leaving the authorized ROEs at virtually the bottom of the regulated utility universe. Moody's has said as much, noting that "the current ratings [post-downgrade] more properly reflect [the Utilities'] financial strength relative to their peers." Moody's further cautioned that a further "decline in [the Utilities'] financial metrics … for an extended period" could lead to another downgrade.

NS-PGL Ex. SMF-1.0 at 13, LL. 251-58 (emphasis added) (footnote omitted).

Mr. Fetter also presented a table showing the range of returns granted to a group of natural gas and electric companies. The average for the natural gas distribution companies was 10.02%, while the average for the electric companies and combination companies (many of which own generation) was 10.36%. The range of returns in the entire sample was 8.75% to 11.5%. According to the Companies' witnesses, by granting the return of about 9.5% recommended by Mr. McNally, which is about 0.5% below the natural gas

average, the Commission's reputation would become negative on Wall Street. This contrasts with Mr. Fetter's view on the Companies' last case, which he believes was viewed as "relatively constructive" by investors. *Id.* at 13, LL. 248-49.

Q. How do you respond to the prospect that Wall Street will react negatively to a Commission order with an allowed return of 9.5% or below?

A. The most fundamental response to the Companies' testimony is that the Commission should not abandon its cost-of-service principles because a consultant says that its decision may disappoint Wall Street. It would be just as wrong to give up cost-of-service principles because some particular ratepayer does not like a rate increase. In the past, attention to Wall Street and the actions of other Commissions may have silently influenced regulators' cost of capital determinations. Now, it appears that the Companies wish to make Wall Street and the returns granted by other regulatory agencies explicit, direct considerations in the Commission's determination of the appropriate cost of equity. If the Commission discards the notion of determinations of the cost of capital based on objective market data, then it is also throwing out the concept of rates based on utilities' costs of service.

Q. What are the consequences of basing cost of equity determinations on the actions of other commissions or the wishes of Wall Street?

A. There are several serious consequences of abandoning objective data on cost of capital in favor of conforming cost of capital determinations to the decisions of other commissions and the sentiment of Wall Street.

First, returns granted by other commission are relevant only to the extent that (a) the other utilities and the Companies have the same characteristics that affect the cost of

capital and (b) the granted returns are demonstrated to be consistent with the cost of capital appropriate to those characteristics. If, on the other hand, the returns granted to other firms are above their real the appropriate cost of capital -- or reflect those firms' greater risk -- relying on comparisons to grant a similar return will assure then the comparison simply means that granting a similar return to Peoples Gas and North Shore will assure that the Companies will earn above their real costs of capital.

Moreover, Mr. Moul's observation that market-to-book ratios for the utility industry are 1.75 (discussed more extensively below) shows that, as a whole, the industry is earning much more than its cost of capital. Granting the Companies a return commensurate with such ratios and granting a similar return on equity would provide the Companies with returns above their respective real costs of capital.

Second, the Companies' allegation that a return below 9.5% would be outside the mainstream ignores the differences in risk between the Companies and other companies on the list of other regulators' awards. Unlike other firms in the list displayed in Mr. Fetter's testimony, the Companies have low and stable growth, no ownership in generation plants, proposed and in-place riders that transfer risk from shareholders to ratepayers, and the generally low risk associated with of natural gas distribution utility companies. Therefore, it is not appropriate to compare the rates of return recommended to the Commission in this case to those awarded other companies whose pertinent characteristics have not been examined. (I comment further on the respective risks of Peoples Gas and North Shore relative to other utilities in the third section below.)

Third, using the rate-of-return decisions made by other regulatory agencies assumes that those commissions made objective, ground-up analyses of the risk associated with utility company investments and the appropriate return. To the extent that the decisions

made by other commissions also reflect comparisons with previous regulatory decisions (something I believe to be true), the return comparisons are hopelessly circular and provide no useful data on the Companies' true cost of capital.

Fourth, statements by the Companies' witnesses that a return of 9.5% or below will upset Wall Street and result in negative consequences to ratepayers implicitly accept that the objective of the ratemaking process should be to maintain or increase stock prices and bond ratings. Fair and efficient rates are geared to providing a return equal to the Companies' respective costs of capital, not happiness on Wall Street or for particular ratepayers.

Fifth, use of returns granted by other commissions ignores an upward bias in granted rates of return that are driven by pressure from Wall Street. Any tendency by regulatory agencies to attempt to please Wall Street by granting returns at or somewhat above the average of returns approved by other commissions feeds an upward spiral of awarded returns. Mathematically, as more regulators grant a rate of return at or above the average of past awards, the average itself increases, and the difference between the awarded rates of return and the real cost of capital widens. Once the rate of return is established above the cost of capital, other commissions follow suit in order to maintain a positive standing with Wall Street. Each regulator's desire to have a better-than-average ranking with Wall Street investors pushes the returns continually upward. The recent financial crisis allows utilities to add a new fear factor – the threat of financial meltdowns resulting in no access to capital if the Commission does not allow relatively high returns.

In sum, unless commissions use independent and objective evidence in evaluating the cost of capital, upward biases will be aggravated, market-to-book ratios will deviate

further from 1.0, prices paid by ratepayers will include a premium that is tantamount to an increasing tax, and investors will receive an unnecessary windfall.

Q. Why do you think the Companies relied so heavily on comparative returns and Wall Street reactions in their rebuttal testimony?

A. In a typical rate case, the utility company presents testimony that is often difficult to understand (perhaps purposefully so) and uses models and inputs that clearly overstate the true cost of capital. After Staff and intevenors critique the utility's cost of capital analyses and derive lower estimates, the utility trots out evidence of actions of fellow regulatory agencies, hoping that such data will persuade the Commission to reject the lower returns proposed by Staff and intervenors. While the utility's rebuttal testimony presents arguments responding to Staff and intevenors, it really emphasizes that the Commission should look at what others are granting. Further, there is generally a warning that if the Commission allows a lower return than the utility requests, the Commission will incur the wrath of Wall Street, a plummet in stock price, or even worse, a bond downgrade.

The testimony in this case follows that pattern closely. The Companies have been straightforward in their warnings or threats of bad reactions from Wall Street. On the other hand, the rebuttal testimony with respect to technical issues was particularly dense. Mr. Fetter's only apparent purpose was to present comparative data from other commissions and comment on the reactions of the financial community. His technical and quantitative testimony relates mainly to the cost of debt, not equity. The most understandable testimony from Mr. Moul was his opinion that Wall Street would be "shocked" or "extremely concerned" if cost of capital recommendations made by others are accepted. NS-PGL Ex. PRM-2.0 at 2, LL. 33-35.

Q. Are the returns granted by other regulatory agencies consistent with Mr. Moul's cost of capital recommendation?

A. Despite Mr. Moul's assertions that the comparative returns support his recommendation, they do not. Returns granted for natural gas distribution companies have been far lower than the 12% estimate made by Mr. Moul, as shown in the table below.

Company and Date	Return
Peoples Gas (FL) 5/5/2009	10.75
Atmos Energy (TN) 3/9/2009	10.30
Northern Illinois Gas (IL) 3/25/2009	10.17
New England Gas (MA) 2/2/2009	10.05
EnergyNorth Nat Gas (NH) 5/29/2009	9.54
Connecticut Nat Gas Corp (CT) 6/30/2009	9.31

Note that the two most recent cases are below 10%; the latest case is 9.31%. These numbers are much closer to my recommendation, the recommendation of Mr. Thomas and the recommendation of Mr. McNally than to Mr. Moul's 12% number. Peoples Gas's and North Shore's respective customers should be "shocked" or "extremely concerned" if the Commission adopts Mr. Moul's recommendations.

Q. Are you familiar with any recent rate case before the Commission in which a utility presented evidence of returns approved by other regulatory agencies to support its proposed cost of capital?

A. Yes. In a recent Commonwealth Edison Company ("ComEd") rate case, the utility submitted a chart showing 19 returns on equity approved by the ICC and other regulatory agencies during 2004 and 2005. ICC Docket 05-0597, ComEd Ex. 38.0 at 13, LL. 284-88; ComEd Ex. 38.1.

Q. Did the Commission accept as relevant ComEd's comparison of the returns on equity proposed in Docket 05-0597 to returns on equity approved by the ICC and other regulatory agencies during 2004 and 2005?

A. No. The Commission rejected such facile comparisons. In particular, in its Order, the Commission stated:

> ComEd asserts its cost of equity should reflect the costs of equity recently approved for electric utilities in the United States. The cost of equity appropriate to ComEd, however, is specific to that utility. ComEd may not simply adopt the cost of equity set for other utilities scattered around the country, for which the facts and circumstances are not necessarily similar. Rather, pursuant to Section 9-201 of the Act, ComEd must prove that its proposed cost of equity is just and reasonable.

ICC Docket 05-0597, Final Order at 154 (July 26, 2006). Peoples Gas and North Shore present the same sort of evidence that ComEd submitted in Docket 05-0597. The Companies' comparative evidence in this case is no more compelling than the comparative evidence ComEd relied on in the earlier case.

III. RELEVANCE OF PEOPLE'S TESTIMONY ON INVESTOR EXPECTATIONS

Q. How do the Companies' consultants characterize the importance of investor rate-of-return expectations in the rate-setting process?

A. Both Mr. Fetter and Mr. Moul believe such expectations are almost of paramount importance. Mr. Fetter would set investor expectations as the Commission's target. "From my perspective as both a former regulator and credit analyst, returns [that Staff and City/CUB] propose are out of sync with the ***market and current investor expectations***." NS-PGL Ex. SMF-1.0 at 5-6, LL. 114-16 (emphasis added). He added that "From the perspective of major investors, [Staff's and City/CUB's respective recommendations] are likely to be viewed as low and anomalous, especially given that the Utilities' higher current

allowed ROEs were set before the full negative effects of the economic crisis had been felt. *Id*. at 16, LL 332-35. Mr. Moul introduces his testimony by stating that his aim is to determine whether "costs of equity proposed by Messrs. McNally and Thomas are consistent with the current ***expectations of investors***…." NS-PGL Ex. PRM-2.0 at 2, LL. 23-25 (emphasis added).

Q. Are investor expectations the appropriate target in establishing the proper cost of capital?

A. Investor expected returns on equity are not directly relevant in determining the cost of capital for a regulated utility company. The Companies use investor expectations in an inappropriate manner. The import of their consultants' respective testimony on this issue is better stated as "keep the stock price up."

Q. Can you provide a hypothetical example to explain how investor expectations with respect to earned rates of return are not relevant to the cost of capital determination?

A. Yes. It is easy to prove the irrelevance of investor expectations by considering the following hypothetical example.

> A generous state, say Alaska, with an AAA bond rating decides to guarantee that the return earned by a natural gas distribution company will be 25% through using a series of riders and other mechanisms. Because of the State's AAA bond rating, assume that Alaska can borrow money at an interest rate of 4%. Further, the State enacts a law that mandates the rate of return will be set at 25% and the government will step in to guarantee the return even if all ratepayers leave the system. In this case the expected rate of return is 25% while the cost of capital is the interest rate Alaska pays on AAA debt of 4%. If the example were changed so that Alaska guarantees a rate of return of 15% instead of 25%, the cost of capital would still be the interest rate on AAA debt of 4%.

In the above hypothetical, the rate of return that is **granted** is irrelevant to determining cost of capital. The rate of return **earned** is also irrelevant to determining the cost of capital. Finally, the rate of return **expected to be earned** is also irrelevant. The only thing that is relevant to the cost of capital determination is the risk of the cash flows, which in this case is driven by the guarantee from the State. The cost of capital in the example is 4%.

Q. If the rate of return granted by the Commission is different from investor expectations, will this affect the stock price?

A. Yes. If the rate of return investors expect is above the actual return granted by the Commission, then the stock price will be fall. This is simply the result of a different wealth transfer than was expected. The Companies' emphasis on investor expectations demonstrates the priority placed on increasing stock prices. The objective is understandable, but Peoples Gas and North Shore and their consultants forget that increasing stock prices is not the objective of the ratemaking process. Ratemaking rests instead on cost of service, which requires setting the rate of return at the true cost of capital.

Q. Mr. Moul included a leverage adjustment in his discounted cash flow ("DCF") analysis when determining his his recommended returns for the Companies. Is Mr. Moul's leverage adjustment consistent with the Companies' objective to maintain or increase stock prices?

A. Yes. Mr. Moul acknowledges that his leverage adjustment focuses on the Companies' market value (stock price) being higher than the book value (assets/shares):

> My leverage modification to the DCF was fully supported in my direct testimony, where I demonstrated that the market value of the capitalization for the Gas Group is much higher than its book value capitalization.

Id. at 27, LL. 528-30.

Mr. Moul's statement implies that his adjustment would not be necessary if the Companies' respective market-to-book ratios equaled 1.0. It is true that if the Companies' true cost of capital were used in setting rates, then their market-to-book value would fall to 1.0. The reason for adjustments such as Mr. Moul's leverage adjustment is that utility companies wish to maintain their market-to-book ratios above 1.0. To make the DCF model analysis sustain stock prices, rather than simply measuring the cost of capital, an adjustment such the one Mr. Moul proposes is necessary.

Q. Do investor expectations play a role in the determination of cost of capital?

A. Yes, but the expectations that are relevant are not subjective expectations about the return on equity a regulator will grant. The function of the DCF model is to derive the cost of capital from two quantities -- (1) the expected cash flow and (2) the value of the company. The value of any investment is a function of its expected cash flow and the risk of those cash flows, as measured by the cost of capital. For the value of a stock, the basic valuation equation shows that the stock's value is a function of the firm's expected cash flow (to infinity) and its cost of capital.

The DCF model is premised on the fact that we know the value of the stock, because it is an observable market datum. With knowledge of that value, if we know the expected cash flow then we can derive the cost of capital.

Q. If the expected cash flow changes because of a change in the expected rate of return, how is the DCF model affected?

A. The valuation equation just discussed means that there are three variables in the DCF model – the share value, the expected cash flow, and the cost of capital. If the expected cash flow changes, then the stock value will change. However, if the variability of cash flows (risk) does not change with the change in expected cash flow, the cost of capital is not affected. Nothing in the DCF equation suggests that the cost of capital should be equal to the expected return, or that if the expected return equals the actual return a company will be earning its cost of capital. It is clear the Companies are worried about the share value side of the equation and would like to increase the rate of return above their cost of capital to maintain market value.

IV. RISKS FACED BY INVESTORS IN THE COMPANIES' STOCKS AND BONDS

Q. What is the picture the Companies' witnesses paint of the risks and expected growth rate the utilities?

A. If you did not have any knowledge of the Companies other than reading the testimony of Messrs. Moul and Fetter, you would think that the Companies were high risk/high growth investments tantamount to something like a high tech start-up. For example, respecting the general risks faced by investors in the Companies, Mr. Fetter stated that natural gas distribution companies are exposed to a variety of risks. He included specifically "operational risk, commodity risk, contract counterparty risk, regulatory risk (including regulatory lag), capital markets volatility, unforeseen event risk, and so on." NS-PGL Ex. SMF-1.0 at 14, LL. 284-87. He added that the company is also exposed to inflation risk, stating "Moreover, fear of inflation, perhaps soon but almost certain eventually, occupies

current investor thinking, bringing the potential for both inadequate debt cost recovery and an authorized ROE that is too low. *Id*. at 15, LL 296-98. Quoting a report from Moody's Investors Services, Mr. Fetter mentioned that Peoples Gas and North Shore also may have risks related to raising funds from banks:

> Dramatic changes in the financial markets during 2008 have materially changed the banking environment for utilities going forward, which will make upcoming credit facility renewals significantly more challenging. . . . Those banks that do remain will be constrained in both their ability and inclination to provide traditional credit, especially at the relatively low pricing levels and on the liberal terms and conditions that prevailed prior to mid-2008.

Id. at 10, LL. 187-94.

Mr. Moul testified that Peoples Gas and North Shore have both a high level of risk and high growth rates. In terms of risk, he states that Peoples Gas, North Shore, and other utility companies are very risky because they must raise capital even in economic downturns:

> Public utilities are uniquely exposed to the volatility of the equity market because they must be in a position to raise capital during all phases of the capital market cycle so that they can continue to invest in their business and meet their public service obligations.

NS-PGL Ex. PRM-2.0 at 6, LL. 113-16.

In addition to being risky, Mr. Moul claims that Peoples Gas and North Shore are high-growth utility companies. For example, when responding to Mr. McNally, he stated that it is reasonable to assume that the Companies will grow at a higher rate than the overall rate of the economy on an indefinite basis. *Id*. at 15, LL 306-09. This implies that Peoples Gas and North Shore will grow at a faster rate than other companies in the economy. Mr. Moul suggests that one reason that the Companies are high-growth stocks is that the Companies can experience a high rate of productivity growth:

> Productivity growth has been leading contributor to higher growth rates for public utilities. Natural gas utilities have embarked upon a significant consolidation in the sector in which they operate.

Id. at 19, LL. 384-86.

Q. Do you agree with Mr. Moul's and Mr. Fetter's assessments that the Companies' investors are exposed to substantial risk?

A. No. The Companies currently enjoy or seek a pass-through of commodity costs, riders that mitigate demand volatility, the availability of future test years to avoid regulatory lag, the use of a fixed rate debt, and low debt leverage. These circumstances mean that the risks mentioned by Mr. Fetter are to a large extent mitigated. However, rather than exchange qualitative anecdotes about the risk of the Companies, the stock market data presented in my direct testimony provides the Commission with objective quantitative data about the risk of regulated natural gas distribution companies.

Given that the value of a security depends on the future cash flow, a stock that has higher variability means that it also has high cash flow volatility (risk). Inspection of the stock price performance of regulated local distribution companies confirms the low risk nature of those companies. To the extent that the regulated portions of the Companies have no non-regulated marketing activities, the true risk of the company is even less than the risk illustrated in the comparative stock price graphs included in the text of my direct testimony and appended thereto as CUB-City Ex. 1.2.

Q. Do you agree with Mr. Fetter's assertions that inflation risk is a major factor that makes equity investments in utility companies riskier than equity investments in other companies?

A. No, I do not. As I explained in my direct testimony, inflation risk is most serious for holders of long-term bonds and least serious for equity investments in utility companies. Utility companies that experience increasing costs due to inflation are able to submit rate increase requests, which can protect equity investors but do not aid bond holders.

Q. Do you agree with Mr. Moul that utility companies are uniquely exposed to volatility of equity markets because they must continue to make capital expenditures even in economic downturns?

A. No. First, as shown in my direct testimony, the volatility of utility share prices has not been anywhere near the volatility of other stocks during the last two major stock market downturns. Second, to the extent that capital expenditures for a natural gas distribution company are driven by new residential and business development these expenditures can -- and have been – reduced. Third, the dilution in earnings per share from new equity issues (if, for example, a utility must continue investment in an economic downturn as Mr. Moul describes) arises when a company must issue shares and the market-to-book value is below 1.0. According to Mr. Moul, this ratio is not typical for the industry, which implies that the risks of earning dilution do not exist.

Q. What is your response to Mr. Moul's assertion that the Companies are relatively high-growth firms.?

A. Mr. Moul's comments are surprising. It is difficult to think of an industry with less exciting growth prospects than natural gas distribution (expect for an industry in decline, such as newspapers.) Value Line, the investment analysis group that Mr. Moul respects so much, noted in an analysis of Northwest Natural Gas that the U.S. average customer

growth rate, which ultimately drives the growth rate in earnings, is about 1% per year. Finally, Mr. Moul's comments on growth driven by productivity ignores the regulatory process. Even if productivity gains could be realized from mergers (an issue which is not at all resolved), to translate into earnings growth, the gains would have to accrue to shareholders through an increased return on equity, rather than to ratepayers.

Q. Do you agree with Mr. Fetter's suggestion that difficulty in raising money from banks has increased the risk and the required return of natural gas distribution companies?

A. Only to the extent that banks charge higher fees and credit spreads, which should be reflected in cost of service. Utilities that are having problems renewing banking services are companies engaged in speculative energy trading activities. Mr. Fetter does not demonstrate that financial problems at banks translate to a higher required return for the Companies.

V. RESPONSE TO SPECIFIC COMMENTS RESPECTING THE ANALYSIS IN MY DIRECT TESTIMONY

Q. In your direct testimony, you made an analysis of stock price variations of various natural gas distribution companies to demonstrate the relative risk of owning utility and unregulated firm shares. What was the Companies' response to this analysis?

A. Mr. Moul opined that my analysis was misleading and that natural gas utility companies do not have less risk than other companies. He asserts that my conclusion was biased, pointing to the initial and ending price points. Mr. Moul suggests that the selection of different price points would result in a different conclusion. *See* NS-PGL Ex. PRM-2.0 at 43, LL. 873-76. Mr. Moul also argued that my analysis provides a one-sided picture that

reflects only down ("bear") markets without comparisons in up ("bull") markets. *Id*. at 43, LL. 876-78.

Q. Does your analysis use a biased choice of starting and ending points?

A. Not at all. I presented trends in stock prices for each utility company examined for the period 1995 through May 2009. This period covered two market crashes – the "bear market" declines in equity values after the so-called "dot com bubble" burst and in the recent decline prompted by the sub-prime mortgage derivatives crisis. The period also included "bull market" increases in stock prices before the two crashes. I presented all of this data so that anyone can simply look at the data and inspect the trends of utility shares relative to the overall market. I presented graphs for all of the proxy companies (either in the text of my direct testimony or Exhibit 1.2, which was attached to my testimony), and not for selected firms, precisely so that the Commission could examine the data in these graphs for each firm.

Q. When you evaluated the financial crisis performance of natural gas distribution stocks and the overall market, was your selection of starting and ending periods influenced by an attempt to manipulate the data?

A. No. As I stated in my testimony, I selected the period that matters most to investors – that is, the period from the peak of the market to the trough of the market. This is why I used the period from October of 2007 to March of 2009. I also picked an alternate period beginning just before the crash in stock prices after the Lehman Brothers bankruptcy up to the present. These were not arbitrary dates, but periods during which any real world investor would expect most affected his investments. As I emphasized in my direct

testimony, these periods represent the risk that investors care about most – *i.e.*, what happens to your investment when the world falls apart?

Q. Is your analysis of stock prices focused on "bear" markets instead of "bull" markets?

A. No. First of all, it is not surprising that utility stocks experience less price movement than other stocks. Low-risk companies have lower upside potential as well as lower downside risks – this is the most basic principle in all of finance. It is surprising that Mr. Moul emphasizes the point that the Companies' upside as well as downside potential movement is limited, since he inconsistently claims at the same time that the Companies have high risks. To the point of the question, I examined the performance of natural gas distribution stocks over periods of increasing stock market value, as well as over periods of decreasing prices. (As noted above, these stock-by-stock discussions were included in the body of my direct testimony and my Exhibit 1.2.) Because of biases in Mr. Moul's sample, which includes companies with significant natural gas marketing activities, many of the proxy companies have experienced both strong upside during the bull markets and limited downside during the bear market crashes.

Q. In your direct testimony, you presented an analysis of growth rate expectations that assume returns one percent above the cost of capital. What was Mr. Moul's response to this analysis?

A. Mr. Moul writes that long-term growth rates are "subjective," "pure conjecture" and not "reliable." Specifically he states:

> An assessment of whether a particular growth rate is sustainable for an indefinite period is a subjective judgment. There are no objective parameters that would permit this determination. In fact, assumptions concerning growth beyond the five-years typically considered in the

> analysts forecast are pure conjecture. That is to say, the further into the future that forecasts are made; they become increasingly less reliable. Indeed, forecasts for thirty years into the future are pure guesstimates. It is for this reason that analysts typically do not extend their forecasts beyond five years.

Id. at 42, LL. 839-45.

Q. Do you disagree that estimating growth rates on an indefinite basis is difficult?

A. Not at all. But, as all experts acknowledge, some judgment is required in each of the accepted methods of determining cost of equity.

Q. Is there a way to avoid making indefinite projections of growth rates in the DCF model?

A. No. Valuing a stock using the DCF model requires one to project an infinite growth rate, because corporations do not have limited life spans as human beings do. Since the DCF model requires forecasts of all the future cash flows that will be distributed by a corporation, assumptions of infinite growth rates cannot be avoided. Mr. Moul knows this, even though his testimony suggests that his model stops at year five. Mr. Moul's DCF analysis does not assume all natural gas companies die in five years. Rather, it assumes something equally unlikely -- that the sell-side analysts' forecasted five-year growth rates will persist forever. In discussing valuation with financial professionals around the world, I have learned that the most common approach by analysts is to be conservative and simply to use the rate of inflation for the indefinite period after a company has reached a stable long-term growth rate. Analysts with their own money on the line do not like optimistic assumptions, such as assuming that a utility company can earn a return above its cost of capital over the long-term.

Q. Given that judgment is necessary in making long-term growth estimates, what growth rates should be used in the DCF model?

A. The difficulty in estimating growth rates over the long-term is exactly why one must not make assumptions that cannot be sustained like those made by Mr. Moul. That is, unsustainable assumptions such as (1) investors expect long-term growth at levels that require regulated companies to earn above the cost of capital, (2) the natural gas industry will grow faster than other industries in the economy, or (3) individual companies can grow faster than their industry. Such assumptions defy reason.

Q. Did Mr. Moul or Mr. Fetter respond directly to your derivation of the cost of capital by plotting the return on equity at the point where the market-to-book ratio is equal to one?

A. Not directly, but in his rebuttal to Mr. Thomas, Mr. Moul asserted that a comparison of the amount invested with the current market value of that investment is not indicative of the relationship between market value and book value. *Id*. at 35, LL. 707-08. He stated further that market-to-book ratios above 1.0 do not mean the companies are earning returns above their cost of capital. He alleged that factors such as "speculation," "market sentiment," and the "supply of shares", rather than the ability of a company to produce returns above the cost of capital, drive market value. *Id*. at 35, LL. 702-07. Later Mr. Moul stated that regulatory commissions should not pay attention to the market-to-book ratio because market-to-book ratios for both regulated and non-regulated companies are above 1.0. *Id*. at 35-36, LL. 709-20.

Q. How do you respond to these assertions?

A. After the notion that higher risk requires higher returns, the second most fundamental principle of valuation is that value is created when earned rates of return exceed the cost of capital. Mr. Moul contends that market values do not reflect the underlying cash flow and earning power of a company. In asserting that the markets do not reflect the underlying earnings power of a company, what Mr. Moul is really saying is that the markets do not efficiently value companies. This may indeed be true. But if it is, it means that the Commission should not use stock market data in determining the Companies' rate of return. Given that all of Mr. Moul's analysis is derived from market data, an admission that his analysis inputs are driven by speculation, market sentiment, and the supply of shares, and not objective market factors, would completely undermine all of his analyses.

Q. How do you respond to Mr. Moul's observation that market-to-book ratios are greater than one for both regulated and unregulated companies?

A. The fact that the market-to-book ratios are generally (although by no means always) above 1.0 for non-regulated companies is not at all surprising. It simply reflects the entire reason such firms are in business, which is to earn more than their cost of capital. If the return on investment is equal to the cost of capital, there is no reason for a company to make an investment or to be in business.

The same is not true of regulated firms. For regulated companies, the fact that the market value is 70% greater than book value demonstrates in an unambiguous way that companies are earning more than their cost of capital. Say an investor made a $100 investment in a company through buying assets (the book value) and then that investment value increases to $170. The reason the investment is worth $170 is because the asset

produces more cash flow, on a present value basis, than the amount of the investment. This comes from earning a rate of return above the cost of capital for the investment.

Mr. Moul and Mr. Fetter would like their utility clients to be in the same position as unregulated firms, but the earnings objective for regulated firms contradicts a basic tenet of economic regulation -- that fair and efficient rates are those where returns equal the cost of capital. Mr. Moul sets his discussion in a mythical world where returns precisely equal the cost of capital. In that world, all prices in the economy must be set at marginal cost and no company can have any market power attributable to product differentiation, patents, entry barriers, political influence, or any other factor. That world where firms cannot earn above the cost of capital is not the one in which the Companies operate or this Commission must determine their cost of capital.

Q. Did Mr. Fetter make any comments about your analytical approach to computing the cost of capital?

A. He did make a general statement that my testimony should not be taken seriously, stating:

> From my experience in utility regulatory proceedings, both as a commissioner and as an expert witness, whenever I hear a witness reject the manner in which analysis has been carried out for years, in case after case, and in jurisdiction after jurisdiction, I usually find that recommendation to be well outside the mainstream of industry thinking and analysis. That is clearly what has occurred here with Mr. Bodmer's irregular ROE recommendation.

NS-PGL Ex. SMF-1.0 at 9, LL. 159-65.

Q. What is your response to this statement made by Mr. Fetter?

A. My response is threefold. First, Mr. Fetter's statement is inaccurate. My testimony did not suggest throwing out the models, but being much more careful with the inputs to the

models and to use information from the financial crisis in developing those inputs. I stated this explicitly in my testimony as demonstrated in the following quotation:

> Q. The estimation models (and some of the inputs) that you criticize have been regularly used by this Commission in its past determinations. Are you saying that these approaches cannot be used any longer?
>
> A. Not necessarily. What I am recommending is that the Commission use more caution, greater scrutiny, and firmer transparency requirements when evaluating recommendations derived from data and models whose significant defects and limitations have recently been revealed more clearly than ever before. Moreover, while some of these deficiencies have always been present, more attention is warranted now because, in the current market environment, they can produce greater distortions.

CUB-City Ex. 1.0 at 11, LL. 222-27.

Second, the Companies do not apply the DCF and the CAPM models in anything approaching a traditional manner. The leverage adjustment proposed by Mr. Moul is certainly not part of typical DCF models; his size adjustment for increasing beta is not typical in rate proceedings; the method used by Mr. Moul to derive his risk premium in the CAPM is not typical in valuation circles; and his application of the risk premium model is distorted by current credit market conditions.

Third, Mr. Fetter's comments imply that there is little ambiguity in application of the DCF and CAPM models. A reading of virtually any cost of capital testimony demonstrates that there is considerable ambiguity in the process. I simply suggested that the Commission examine actual stock prices when thinking about beta, consider whether of a company can earn returns above its cost of capital forever, and use market-to-book ratios as a simple way to verify cost of capital analyses. These suggestions were made to use information from the financial crisis to help resolve some of the on-going debates that never seem to find resolution.

VI. COMMENTS REGARDING STAFF WITNESS McNALLY'S TESTIMONY

Q. Do you have comments on the manner in which Mr. McNally of the Commission Staff computed the cost of capital?

A. Yes. Mr. Moul alleged that Mr. McNally purposefully developed a downward biased number, as Mr. Moul alleged. NS-PGL Ex. PRM-2.0 at 23, LL. 444-45. I disagree. I commend Mr. McNally for using objective formulas and procedures. In addition, certain aspects of Mr. McNally's testimony were particularly well done and deserve mention. These include: his computation of the relevant risk free rate for a utility company; the adjustments he made for the transfer of risk associated with the riders; his comments on Mr. Moul's comparable company sample; and his discussion of Mr. Moul's size adjustment which he makes to betas. With the corrections I suggest below, Mr. McNally's cost of equity calculation yields approximately the same cost of equity Mr. Thomas recommends.

Q. Please comment on Mr. McNally's analysis of the risk free rate that should be applied in the CAPM.

A. Mr. McNally concluded that "in terms of interest rate risk, U.S. Treasury bill yields more accurately measure the risk-free rate." Staff Ex. 7.0 (Rev.) at 12, LL. 245-46. His discussion of inflation rate risk and interest rate risk was thoughtful and interesting. Essentially, Mr. McNally recognized that risks of changing rates have much more of an effect on holders of bonds – even government bonds with no default risk – than the risk of changing rates of inflation has on equity securities. Since the risk of uncertain future inflation rates affects long-term lenders much more than equity investors, unless that risk is accounted for in the cost of capital process, the use of long-term bonds as a base for determining the cost of capital will produce biased results. Given the concern about the

possibility of future inflation pointed out by Mr. Fetter, this potential bias impels the use of short-term interest rates in applying the CAPM.

Q. How did Mr. McNally address the small company (size) premium that Mr. Moul suggests should be applied in the CAPM?

A. Mr. McNally researched the literature, he worked through the logic as it applies to utility companies and non-utility companies, and he concluded correctly that a size premium is not appropriate. *Id*. at 43-47, LL. 861-952. If Mr. McNally made the same kind of investigation of the mean reversion adjustment for beta, I am confident that he would come to the conclusion that the adjustment is certainly not valid for utility companies, and it may not be valid for non-utility companies.

Q. Please comment on the manner in which Mr. McNally addressed riders proposed by the Companies.

A. Mr. McNally attempted to quantify something that is very difficult to measure, and he correctly recognized that should all of the riders at issue be approved, the Companies' risk will be comparable to that of a AAA bond. *Id*. at 28-36, LL. 534-706. His work correctly identified the significant risk transfers that must be accounted for in the cost of capital when fundamental changes in the regulatory process occur. If all of the riders are approved, the Companies will look very much like municipally-owned utility companies, which have high leverage and set rates to maintain a tight coverage ratio.

Q. Mr. Moul criticized Mr. McNally's financial risk adjustment for the gas utilities included in Mr. Moul's sample group. NS-PGL Ex. PRM-2.0 at 8-9, LL. 154-59. Do

you agree that adjustments to account for different financial risk between the Companies and other firms in a sample are appropriate?

A. Yes. It is impossible to find companies that perfectly replicate the operating and financial risks of the Companies. As I discussed in my direct testimony, many companies in Mr. Moul's sample group have non-regulated activities. Mr. McNally pointed out that the companies have different financial risks as well. *See, e.g.*, Staff Ex. 7.0 (Rev.) at 21, LL 405-08. Given that the sample is intended to represent the risk of a specific company, it is perfectly acceptable to adjust the sample to account for the different risks between the target company and the group as a whole. This sort of adjustment is common when using comparable companies to establish the value of a stock.

Q. Do you have any recommendations for Mr. McNally to improve his application of his DCF model to the evidence in this proceeding?

A. Yes. I have three suggestions. The first adjustment is to recognize that all of the companies in the sample except one are earning and are expected to earn more than its estimated cost of capital. The second adjustment uses Energy Information Agency ("EIA") data to recognize explicitly the lower growth rate estimated for natural gas distribution than for other industries. The third adjustment is to remove the quarterly discounting, which is inappropriate and biases the adjustment upward.

Q. Please explain the bias in Mr. McNally's DCF model that comes from assuming that companies can continue to earn rates of return above their cost of equity on in indefinite basis.

A. Each of the companies in the sample (except one) is earning a rate of return above Mr. McNally's cost of equity estimate. Further, according to Value Line, the earned returns above the cost of capital are expected to continue for the next few years. For example, AGL is expected to earn returns of 12.5% 13.0% 14.5% for 2009, 2010 and 2011 respectively. Similarly, SJI Industries is expected to earn 13.5% 13.5% 14.5% for the next three years. Assuming that a company can continue to earn return above its cost of capital when the entire objective of all of the testimony and analysis is to set the return to the cost of capital is wholly illogical.

Q. What is the bias in Mr. McNally's long-term growth rate?

A. Mr. McNally acknowledges that his growth rate may be biased upward which results in an upwardly biased cost of capital estimate, stating that "while the overall economic growth rate may be biased upward for generally low growth companies such as utilities…." *Id*. at 7, LL. 147-49. Mr. McNally used information from the EIA to derive his long-term growth estimate. This publication includes industry specific growth estimates, which demonstrate that the real growth in natural gas demand from commercial and residential consumers is estimated to be about 0.6%. Adding EIA's expected inflation rate to the real growth results in return on equity of 2.6% is 1.4% below the growth rate used by Staff and, therefore, translates to a lower DCF estimate.

Q. Is the quarterly discounting used by Mr. McNally appropriate in setting a rate of return?

A. No. I have demonstrated in other cases that while quarterly discounting may be appropriate in valuing a share, it is not correct for setting rates, and it results in an

unambiguous increase in the rate or return above the cost of capital. This increase in the rate of return is not compensated for through a working capital adjustment or anything else. The quarterly adjustment is not used in most other regulatory agencies, and it is not even advocated by the Companies. The quarterly discounting approach is simply wrong from a mathematical perspective. It is not surprising that the Commission has not corrected this longstanding because proof of the error is somewhat dense. I have prepared a technical workpaper that I hope Mr. McNally and the Staff can review with an open mind so that they can once and for all make a correction that should have occurred years ago.

Q. Please comment on the mean reversion in beta used by Staff.

A. This is another issue that appears to be driven by inertia. I hope Staff takes note of what happened to the utility shares when both the dot com crash and the sub-prime crash occurred. Through looking at what happened to individual stocks when the market nose-dived, one can see that the upward adjustment to utility betas is entirely inappropriate.

Q. What is your opinion about the expected market risk premium of 9.91% used by Staff?

A. Before the crisis this would have been considered a completely absurd number. Now, one cannot really use the Ibbotson historic studies because declines in the current market imply a negative premium. Furthermore, it is possible that the premium has come up to some extent from the 4-5% used by investment banks before the crisis. However, a 10% premium over the long-term is just as implausible as assuming that the Companies can grow at a faster rate than the overall economy over the long-term. If equity investors could really earn such high returns, and if labor and capital productivity grew by historic rates,

then there would be dramatic and unrealistic transfers of wealth from labor to capital providers.

Q. Does this conclude your rebuttal testimony?

A. Yes.